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ABSTRACT

To project the effects of population change on vocational/technical education, a project surveyed the literature (1977-79) on the futures of general and vocational education and on the effects of declining enrollment and applied these concepts and projections to the field of vocational/technical education. Vocational/technical education seemed more directly linked to economic and socio-cultural influences than to fluctuations in enrollment patterns. Despite the effects of declining student populations, vocational education is increasing in both enrollments and courses taught. As other elements in the educational structure are affected, however, general education is expected to shift its emphases to compete with vocational education for a share of the dwindling student population and the growing adult continuing education market. Recommendations for vocational/technical educators in future planning and programming included (1) developing a better understanding of the movement toward generalization of services; (2) planning to serve the growing need for adult vocational retraining; (3) learning to influence and deal with increasing governmental involvement; (4) recognizing and planning for changing social conditions and values; (5) emphasizing communication and personal-social skills, cognitive/conceptual understandings and quality of life aspects of vocations in the curriculum; (6) preparing to compete for student populations and revenue; (7) using market analysis techniques to assess consumer needs and public relations to enhance the image of vocational education; and (8) continuing research and development efforts. (YLB)

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FINAL REPORT

THE PROJECTED EFFECTS OF POPULATION
CHANGE ON VOCATIONAL/TECHNICAL EDUCATION

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Project population

Groups	Numbers of persons:	
	Impacted by project	Conducting or giving input
students		
secondary	<u> X </u>	<u> </u>
postsecondary	<u> X </u>	<u> </u>
adult	<u> X </u>	<u> </u>
school personnel		
secondary	<u> X </u>	<u> </u>
postsecondary	<u> X </u>	<u> </u>
adult	<u> X </u>	<u> </u>
other		
teacher educators	<u> X </u>	<u> </u>
employers	<u> </u>	<u> </u>
employees	<u> X </u>	<u> </u>
other: _____	<u> </u>	<u> </u>
special needs		
disadvantaged	<u> X </u>	<u> </u>
handicapped	<u> X </u>	<u> </u>
migrant	<u> </u>	<u> </u>
minority	<u> </u>	<u> </u>
limited English proficiency	<u> </u>	<u> </u>
other: _____	<u> </u>	<u> </u>

*NOTE: Because of the nature of this project, this study is applicable to all students in vocational/technical education. Groups checked, then, infer the total population in these areas.

III. Statement of the Objectives

The objectives of this project were amended subsequent to the award. It became the overall intent of this project to survey the writing and research in the field and to apply that thinking to vocational/technical education in relation to the general topic of population change, or more specifically, enrollment decline.

The Goal of this Project: To project the effects of population changes on vocational/technical education.

Objectives

1. To survey the literature on the future of
 - a. education in general
 - b. vocational education
2. To survey the literature on the effects of declining enrollment
3. To apply these concepts and projections to the field of vocational/technical education.

IV. Statement of Problem/Purpose

Introduction

The development of the American educational system has progressed largely in response to an increasing population and an accelerating demand for facilities and services. For example, in the years between 1950 and 1974, the general population climbed from 152 million to 212 million, an increase of thirty-nine and one half percent. The increased demand for educational facilities and services was due to an increase of 29.5 million elementary and secondary students in 1954 to a peak enrollment of 46.1 million students in 1971 representing a total increase of 56.3%. While the population to be educated increased, so too has the overall cost of education, with the figure climbing from 15.6 billion in 1959-60 to over 81 billion in 1977-78. (Foster, 1979)

The socio-economic and demographic dynamics which contributed to such conditions have changed. It is apparent from population statistics that not only has the population growth slowed, but a dramatic change in the age distribution of the population has begun. The traditional school-age population will decline in numbers while the adult population will grow through the year 2000. Educators are feeling the effects of the need to reorient themselves from an expansionist to a reductionist perspective. According to recent information from the Indiana Department of Health, "... There has already been a sharp drop in the 0-13 group, and the 14-17 (high school) population is now declining." (Indiana Vital Statistics Newsletter, Spring, 1978, Vol. 2, Indiana State Board of Health.) Clearly, educational decision-makers at every level and from every discipline must

learn to cope with and to plan for the process of organizational restructuring based on a changing and/or declining population of clients.

Population decline has had its greatest educational impact in the traditional K-12 public school system. Class sizes have dwindled to the point where combined classes have been necessitated and in many areas, schools have had to be closed. The question at issue has been and will continue to be, can and should the schools regard social changes as surface phenomena or should the schools adapt a dynamic reactive orientation in relation to such conditions? There are, however, other factors which impact our social order and therefore have an effect on the condition of the educational enterprise. Futurists have the luxury of building castles in the sand, but educational decision-makers must grapple with the allocation of funds and commitment of human resources. Their decisions must take into account conditions internal to their organization as well as environmental aspects. Among the environmental influences which have been of concern in recent years have been the following:

- . the influence on school control of the changing federal-state-local relationship
- . the impact of the sexual revolution on the schools
- . the effects of technology and the media on the environment of the child
- . the significance of changing social value patterns
- . the imperative to integrate society through the mechanism of public education
- . the imperative to assist the socially, culturally, and economically disadvantaged through increased educational opportunities
- . the imperative to include the handicapped within the "normal" educational setting

- . the effect on schools of the consumerism psychology
- . the growing skepticism and mistrust of government and governmental service provided
- . the "taxpayer revolt"
- . the effect on schools of the increased power of teacher groups
- . the broadened role of the courts in educational decision-making and the trend toward "legalism" in delivery of educational services

In addition to such factors as those mentioned above, public attitudes about education are affected by the pessimism associated with a protracted period of inflation, a revision in the world-wide political, industrial, and economic power distribution and a diminishing national image.

Given the multiplicity of factors which may have an impact on the structure and function of education in America, projecting the future to the extent that planning may proceed is an extremely tenuous task. Still, educational planners must discern, wherever possible, the salient forces which will shape their futures and they must do so in the face of change which occurs at an ever increasing rate.

In addition to recognizing such external conditions, it is important that educational planners recognize the inter-relationships of the structural components of the educational organization. Vocational education, as other educational sub-units is an integral part of the total educational enterprise, must be viewed in this context. The traditional organizational structure has been characterized by the concept of specialization of function. That is, consistent with the factory model, the educational organization has evolved on the principle that specialized tasks may be

more efficiently and effectively carried out by specialized organizational units. As various educational needs have become preeminent, specialized structures have been created to deal with them. Thus, the high school was added to the primary school unit, and later the junior/middle school was added. Vocational education was assigned to a separate structure as was special education. As new voices are heard and new needs are given legitimacy, new units are developing. Pre-school and early childhood education, now outside the structure, is moving closer to being included. Continuing education or adult education has gained in organizational stature. The potential exists, organizationally, to accommodate the educational needs of our population virtually from the cradle to the grave. The question is, are the separate organizational units able to be structured and restructured in response to fluxuating social conditions? If so, what form should that restructuring take, and in relation to what conditions?

Each sub-system within the educational structure has established for itself a position and relationship vis-a-vis the other elements of the system. Each has its allocated population to serve and each has its share at the public trough. Some units, such as vocational education and special education, have separate funding sources from the others. Each unit has its own identity as its "discipline." A major effect of the social factors identified above is to place stress on any attempt by the organization to remain static. That is, secondary education, which gained a favored position during the mid-fifties and sixties with the help of the National Defense Education Act and an emergent emphasis on a college education as a necessary entree to the "good life," has enjoyed a high level of status and support relative to the other organizational sub-units. Organizational

structuring, however, is not as flexible and readily altered as are social conditions. Public education has never led the way to social change. In general, it has not even readily followed along. Typically, our educational system has had to be coaxed, cajoled, and even dragged along behind.

Purposes of this Report

Given the fluid nature of the social order and the general static nature of the organization, the vocational education sub-system, like all educational sub-systems, is confronted with a future which is only partially predictable. Decision-makers, however, must attempt to assess both present and future conditions to determine planning priorities, funding patterns, and needs for structural alterations in the organization.

Declining enrollments have given rise to serious concerns among educators. A service organization without a population of clients is a contradiction in terms. Thus, as the sub-units of the educational enterprise experience the decline, they instinctively understand the danger of a parallel decline in their position vis-a-vis the others. In addition, as the school-age population decreases in relation to the total population, the social emphasis on that service organization may be shifted to other systems of the social order. Thus, as the largest population group grows older we can predict an increasing social emphasis on employment opportunities, employee rights, and concerns associated with the post-secondary and adult populations. Ultimately, we can predict increased emphasis on the social needs of the aged, retirement programs, health services, and social security programs.

This paper will attempt to examine both the potential impact of various selected social conditions as well as the possible organizational

responses to those conditions as they affect the vocational education sub-system. The questions to be explored then will be:

1. What are the major current and future societal factors which will impact the educational organization, and specifically the vocational education sub-system?
2. What are the potential vocational education organizational reactions to the projected conditions, and what might be the consequences of these alternatives?

Responses to these questions will result in the author's perspectives of the factors which vocational education decision-makers might take into account in planning and programming for the future.

V. Strategies/Procedures

The authors of this report are not futurists. They did, however, review extensively the work of such futurists as Havighurst, Shane, and others. The authors of this report are not vocational educators. This study was undertaken to provide an external perspective of the sub-system and its potential future(s).

The primary thrust of this work involved the compilation of ideas from a variety of sources. Major divisions of effort were assigned in two general areas:

1. Futures of education (general education and vocational education) (objective #1)
2. Declining enrollment (objective #2)

The works of futurists were examined to see what they had to say about education. The works of educators were examined to determine their analysis of the future. Writings of vocational educators, general educators, and social commentators were sought out. In addition, the rapidly expanding literature on declining enrollment was reviewed. Conferences on educational futures as well as on declining enrollment were attended and an extensive bibliography was produced. The study team met regularly to discuss progress and establish direction.

This procedure was intended to result in the identification and application of the best thinking on the subjects under consideration, and the extrapolations of that thinking to include the vocational education sub-system. (objective #3) What follows, then is a discussion of a variety of social conditions which have been projected by educators and futurists. In addition, these factors are examined in terms of potential impact on both education in general and vocational education in particular.

The discussion of future social conditions is followed by a discussion of declining enrollment. This social factor is given special attention because of its great potential for impact on the educational system. A general summary will bring together these elements as they relate to vocational education.

This report provides a general consideration of potential alternative-futures for vocational education and the social conditions which may be important in producing those futures.

Any prognosis is, at best, a guess. While the emergent social conditions may be reasonably predicted, based on present patterns, the interpretation of effects is always subject to great variance. Thus numerous special interests may be served by one interpretation over another. Political necessity may dictate adherence to one perspective versus another. This report represents the perspective and biases of the study team which produced it. Alternate interpretations of the meaning and effects of future actions are, of course possible, based on the perspectives and biases of other observers.

VI. Findings

Futures and the Educational Enterprise

Assuming that the future is not fixed and that we can influence it, this section will deal with scenarios of alternate futures. It is assumed that the interactions between all segments of our society will influence the future of vocational education in Indiana. In order to create our images of the future so that we may plan for the future, we must analyze social trends in terms of their strengths and weaknesses. Such trends must then be interpreted in terms of their influence on a significance to the educational enterprise. Hardin (4) has proposed that many factors will effect the evolvement of education, such as:

1. improved birth control techniques
2. growing affluence
3. liberation of women, and
4. the impact of values on social trends as well as the impact of social trends on values.

The policy oriented vocational education futurist must ask what values can or should serve as guidelines to action? Decisions made today reflect today's value structure and may not take into account changing morales and norms. An even greater problem is pointed out by Havinghurst, an eminent futurist. The problem stems from the nature of organizational decision-making. That is, the decision-makers tend to be those who are currently "in power."

Decisions tend to be made on the basis of maintaining the organization and preserving the status-quo. Havinghurst points out that, "Americans have a penchant for seeking criticisms of their institutions, and they seem willing to pay money for them. But they pay very little attention to the

proposals of this type of critic. This is an interesting American combination--asking for mordant criticism and then doing nothing about it."

Decision-makers, particularly, political decision-makers, tend to make decisions and then seek evidentiary support and a logical rationale beyond the political arena. Thus, decisions about vocational education may be based on a fixed and rigid set of values which is presumed to be unchanging or on projected values which appear likely as guidelines for future action. Similarly, decisions about vocational education may be based on an objective view of social and organization change which examines possible organizational alternatives, or an organizational-political view which is committed to maintaining current structures in an altered environment. The perspectives used and the values espoused will have a great deal to do with one's interpretations of the impact of certain futures.

The future of vocational education in Indiana will depend, to a significant extent on the far-sightedness of vocational educators in decision-making roles at both the State and Federal levels. This project and other funded efforts of research and inquiry are strong indicators that these decision-makers are concerned about the future and are preparing action plans to accommodate some image of that future.

There are many possible social conditions which could and will have an impact on education in the future. Though a cause-effect relationship may be difficult to sort out relative to specific factors, there are several which appear consistently in the literature and which undoubtedly will interact to affect the educational enterprise. This report will consider the following major components in relation to their projected effects:

1. Governmental regulations
2. population
3. energy
4. the economy
5. science and technology
6. lifestyles redefined, and
7. attitudes toward education

1. GOVERNMENT

There has been, through the past four decades an increasing reliance on government to provide even more in service of the good life of all. The history of Federal involvement in public education is well documented and includes the rapid expansion of authority which accompanies the provision of funding. Beginning with land grants, progressing through vocational education funding, and ultimately providing direct aid to elementary and secondary schools, the Federal government has become a not-so-silent partner in the enterprise. Educational managers have found themselves subject to a myriad of regulations which govern the decision-making process. The proposed new Department of Education at the Federal level provides numerous possibilities for impact. Where now educational funds are allocated through and administered by forty or fifty different Federal agencies, the Department of Education would consolidate those functions and incorporate those funds. Which functions, allocations, administrative sub-systems will ultimately maintain their status and which will be diminished is unknown. What is relatively certain, however, is that more and more, educational policy will emanate from Washington in the form of regulations.

Government intervention, according to Havinghurst, will provide equalization by implementation of part or all of the following alternates:

1. more power to disadvantaged groups
2. gradual, peaceful evolution toward a new social structure and value system, or
3. maintenance of the present power structure by "co-opting" of disident groups through rewards or concession which eliminate their opposition to the economic and political structure

We are witnessing the terminal gasp of provincialism. Our educational system cannot long endure with "Local Control" as its watch word when that word embodies a narrow isolationist conception of the world. Increasingly, schools are being required to adopt philosophies and provide services which, when left to their own devices, they would not and did not provide. The battle cry has been, "equality for educational opportunity."

The educational system, which includes vocational education, must by necessity, be adapted to meet the needs and desires of all social classes; all ethnic groups; all ability levels, in short--all people. Individuals or groups can no longer be excluded because of some physical, mental, social characteristics which make them different. The system must adapt to the individual rather than the individual to the system.

Public Law 94-142, The Education For All Handicapped Children Act of 1975, will provide the logical base for the extension of all services to all individuals alike. Further, that legislation contains within it, provisions which make real the old pedagogical concept of education which takes into account individual differences. This Landmark Legislation defines appropriate education as that which is tailored to the specific needs of the individual. It requires that an individualized educational plan be written which specifies both long range and short range

instructional goals. Clearly, if such requirements can be made of local educators receiving Federal money for handicapped youngsters, other Federal education programs may eventually contain similar provisions. It is well accepted educational doctrine that each child is an individual and learns at a rate and in a manner which is peculiar to that child only. Any generalized acceptance and implementation of the concepts embodied in P.L. 94-142 would have far-reaching consequences for the present system. Based on a factory model, the present system of batch processing necessitates various grouping, matching, and tracking schemes which allow a preponderance of group teaching. These organizational patterns make it possible for one teacher to teach 20-30 pupils per day at the same time. In more cellular arrangements found in junior and senior high schools, one teacher may teach as many as 125-130 per day in one-hour periods. If a serious challenge were posed to the patterns which allow children to be taught in batches, then the structure itself would be challenged. This movement has already begun in the area of special education and special needs students. It will become more generalized, first to include all exceptional groups (such as the gifted, creative, and talented) and then to include all individuals. Thus, educators in all settings will be required to plan for and teach their students as individuals. Smaller groups and more of them will be one outcome.

At the same time, there is continued emphasis on the governmental mandate to integrate divergent elements of the population. For the handicapped, education in the "least restrictive environment" opens the doors to all classrooms, including vocational education. The past emphasis on specialized programs for specialized clientele is being confronted by the

social philosophy which holds that what is needed is a healthy mixture of individuals rather than a homogeneous batch for the sake of efficiency.

Narrow community values, dominated by local power brokers, will hold less sway in the decision-making process. This will cause increasing local dissatisfaction with the public schools and will necessitate greater Federal support. The cycle will continue until the major support and control is at the Federal level.

As higher levels of government gain increasing control over the educational enterprise, the nature of the service must be altered. Wider social goals will be mandated for schools which will be used as instruments of governmental social policy.

Thus, not only will more professional time be needed to plan for the education of individuals, but more manpower will be required to implement such plans. Teacher aides and tutors will be required. Expanded training and in-service training for educators will be needed. More individualization within the "most normal" setting means a smaller pupil to educator ratio. Even in the face of declining enrollments, this could mean the need for increased numbers of education professionals in the K-12 system.

2. POPULATION

Part III will consider in depth the issues which arise in response to reductions in the growth of the population. Several general observations, however, will be made at this point.

To begin with, the population of the United States is continuing to grow. That is, we have not yet begun to reduce the size of our population, nor have we achieved zero population growth. If the current rate of growth

remains constant, the population of the U.S. will be approximately 262.5 million by the year 2000.⁽¹⁾ Within this population though, the pre-dominant age group will be those born between 1945 and 1965. This group will number about 80 million. We have already seen the influence of this age group as it passed through its early years and brought about a cultural emphasis on youth. Virtually all aspects of our society were affected including fashion, values, and norms, advertising, and politics, as this large proportion of our population made its presence felt. There was a decade of youth visibility through protests on campuses and in city streets. There was an end to the draft, an end to an unpopular war, and the beginning of the legalization of marijuana. The voting age was reduced to 18 in Federal elections and in some states the age of majority was reduced to 18 years. These are only a few of the social effects brought about by the existence of this large segment of our population.

It seems obvious that as this age group grows older its effect will be felt in different ways in the culture. Most salient to vocational educators is the fact that this population mass is passing through the secondary education years and entering the occupational and employment years. Increasing emphasis can be expected in the areas of job opportunities as well as job training and retraining. As fewer school-age individuals are available for pre-service vocational training at the secondary level, the organization will need to direct its attention to post-secondary and adult training efforts.

Because of the growing occupational and vocational emphasis brought about by the progress of the age cohorts to this level, the short-run expectation for vocational education will also produce an increased demand.

That is, even despite decreasing school-age enrollments, it is probable that the vocational education sub-system will maintain or even slightly increase the number of students served. This will be the result of an increased percentage of the school-age population seeking specific vocational skills. Thus, while enrollments decline over-all vocational educators may not witness any serious reduction as they will need to serve a larger proportion of the total enrollment.

The long range future of vocational education, however, is not in service of the school-age population. Rather, as the predominant age-cohort group gets older, its needs will be felt most acutely through demands for such services as manpower redevelopment and retraining due to technological advances. Changing career goals and occupational re-direction of a more transient population, a vocational interest and pleasurable learning of technical skills. A movement of life-long learning will radically alter the nature of vocational education, placing greatest emphasis on post-secondary, adult, and continuing education aspects versus pre-service education.

3. ENERGY

Through the 1980's, it is forecast that the U.S. will be largely dependent on foreign services for oil. Beyond this period, Alaskan oil and alternatives to petroleum will make us less dependent on foreign oil. Enormous investments in research on coal, solar, tidal, nuclear, and other technologies will continue. With the eventual change in the technological transformation of the energy base, it is likely that the lifestyle of our country will undergo a variety of alterations. The eventual production of

"cheap energy" holds the promise of emancipation for everyone and the universal good-life. Until then, however, control of the source of petrochemical supplies and fossil fuels has brought about an alteration in the political and economic power structure of the world. All of our technology, and therefore, all of our society, is affected by the availability of energy. Vocational training efforts will increasingly be directed at the conversion, distribution, or control of energy. In addition, it will be necessary to include in such training the facility for adaptability to the evolution of new energy sources. Future workers will need to be able to move into the future to produce and control the potential of various alternative energy sources. The Talmud teaches us that, "If you don't know where you are going, any road will take you there." If an individual is not prepared for the future, it will not matter what course of studies was taken. According to Kenneth Boulding, "The great lesson of evolutionary theory is precisely that it is the meek--that is, the adaptable--who inherit the earth, not the strong..." Vocational educators must educate individuals for the future. This means that vocational training must proceed with some notion of the energy source of the future as well as training people to adapt and adjust to alternatives. Curricula must be adaptable as well. There must a greater emphasis on the centrality of conceptual inquiry as the grounds of knowledge. (5)

4. THE ECONOMY

Closely tied to the world energy supply is the economy of our country. Escalated prices of energy have significantly contributed to the unstable condition of the American dollar abroad. Run-away inflation, a condition

not necessarily confined to the U.S., has its impact on the production and consumption of both goods and services.

In the past, our economy has been based on first agriculture and then industrial production. More recently and continuing into the future, our economy will be based on service occupations, with the total number of those employed growing. Except for intermitten periods of recession, the lack of education will remain the chief stumbling block for those who are unemployed.

An information economy is emerging, based on the production, distribution, and consumption of knowledge which will require more education and at higher levels. At the same time, technological advances continue to make certain knowledge obsolete and require continued absorption and distribution of new knowledge in the form of vocational skill as welll as conceptual ability. Vocational education, once predominatly directed toward manipulative, production oriented occupational skills has gradually begun to add an emphasis on service occupation skills as the demand for such personnel increases. For the service jobs which will be available in the future, a higher degree of linguistic and conceptual competence must be emphasized. According to Rafferty, "for every exotic job that is demanded by industry, twenty jobs will evolve that require:

1. Ability to read at least two syllable words
2. Basic mathematics skills
3. Moderately acceptable speech patterns
- 4.. Willingness to shut up, take orders, and work hard
5. Cheerfulness, helpfulness, and a civil tongue"

In the post-industrial economy, the largest employer of service workers is government. The shift toward such occupations will need to be taken into account in training individuals to function effectively in such organizational climates. Greater awareness of the social norms and expectations of service organizations will be needed in order to help train the worker to succeed in these environments.

5. SCIENCE AND TECHNOLOGY

Americans are used to the constant advance of technology, and since the early 1950's have elevated science to the stature of a religion. Most recently, however, our scientific and technological skills have been combined with the social sciences and humanities. Advances in communication technology have allowed not only the production of knowledge but the dissemination of knowledge as well. Presently, 50% of the Gross National Produce of the nation is linked to information industries. By the year 1990, it is forecast that 70% of the GNP will be associated with such industries.

According to Broudy, "a mature, technologically dominated society should demand of its participants, increased sophistication about science and technology, both for vocational competence and understanding the culture as a whole." The continued explosion of technical knowledge makes the process of vocational training an extremely difficult one. Increased attention must be given to projected job-life, manpower recycling, and other effects of the rapidity with which we must confront change. In addition, the nature of the occupational skills required of service workers will ultimately reduce the overall distinction between the educational sub-systems of secondary versus vocational education. Adaptability and

communication skills will be required of individuals who must live and work in the continuing technological revolution.

6. LIFESTYLES REDEFINED

The lifestyles of individuals in our society are changing as a result of such factors as: the use of birth control; fewer children per family; more single individuals; and the consequences of more women entering the work-force. The emergence of an information economy places greater knowledge at the disposal of individuals who depend less and less on the automatic answers of traditional practice in their decision-making. Individualistic lifestyles place greater stress on self actualization and self-gratification and less and less on group acceptance and compliance. Greater social acceptance of cultural and individual diversity gives rise to greater visibility of such diversity.

Ascriptive role characteristics for men and women which relied on traditional expectations have given way slowly to acceptance of new roles for each. Occupational training will no longer restrict vocational opportunities on the basis of such characteristics as race, sex, or age.

The labor force will have more working mothers entering when their children are very small. According to Havinghurst, this will necessitate the creation of specialized child care centers with professional staffs and services. The working mother of the future will express herself with an occupation which she feels is meaningful. To reach this goal she will require specialized vocational education that will be a part of her life-long learning process.

The rapid change which characterizes our social environment produces, as Toffler describes it, a sense of impermanence, a "throw-away" society.

Our great mobility produces transitory relationships. Individuals not only change jobs several times within their working lives but often change from the permanent to the impermanent, from the traditional to the new and individual, the nature of the social order is affected. So, too, is the worker and the work place.

7. ATTITUDES TOWARD EDUCATION

The Gallop Polls of attitudes toward education show increased citizen interest in obtaining information about school. According to Mitch, "Our public schools operate, more than ever before, in the bright light of public attention." Americans have had a history of interest in and concern for education. American public schools have produced the scientific, cultural, and political leaders of our nation. American taxpayers have supported their educational systems until lately with little question about the value of the outputs of that system.

As our population begins to raise fundamental questions about all social institutions, educators must also be prepared to justify their actions in the cold light of rationality. No longer is education above scrutiny. In response to altered public attitudes about education, the school system, as we know it today, could change drastically in the future. Havinghurst speculates that different types of schools will be established to achieve different social goals. In part, the American system of secondary education could begin to resemble the European tradition, in which, at age ten or twelve, the student has available several alternatives: vocational schools, academic schools, science and engineering centers and the like. The vocational school appears destined to have a greater part

in the future. Rafferty predicts that "more and better vocational education is in the cards, and for a lot more children than are getting it now."

For millions of Americans the great potential of the educational system has been in the promise it offered as societies greater leveler. That is, the route to a better life for ones' children was through education. After all, only in America could a person of lowly station at birth work hard and perhaps achieve great things--even become President of the United States. This was possible because of our system of free public education for all. Education then made possible movement from one social class to another and held out the promise of hope, if not for one generation, then at least for its offspring. Linked closely to the benefits of education has been the potential for economic advancement. A media blitz of a few years ago aimed at reducing school drop-out rates played heavily on this theme: "Don't be a fool, stay in school." Trying to compete in life without an education is like trying to run a race with lead boots on." What we have learned since then is that there is not necessarily a guarantee of economic security associated with educational attainment. Yet to a significant extent, the myth persists. A college degree is still considered a giant step toward financial security and occupational success.

Vocational education also seems to offer the opportunity for occupational advancement and, thereby improving ones' social position. At the same time, however, vocational education has suffered from the image that such upward mobility would be limited by locking the individual into the specific occupational mode in question. According to Tyler, the

American public is presently caught up in a unique situation. They want their children to rise in the occupational and social structure of society. They, therefore, tend to reject courses of study which will limit their chances to enter college. On the other hand, they value work and jobs and want their children to be employable. The problem, then, is that these dual desires are presently seen as being mutually exclusive--one is not available through a college education while the other is not available through the vocational route.

It appears likely that change in these areas will proceed along two paths:

1. A major change in the public attitude toward education will occur. Primary education will cease to be all things to all people, and will begin a slow, laborious process of trimming back its goals and purposes in response to more centrally determined, objectively measurable academic functions aimed at literacy with symbols and institutional enculturation. Advanced academic education will eventually be recognized as another form of vocational education leading to specific occupational choices. There will be a diminution in the mythology that more schooling yields increased income.

At the same time, that general education is moving back toward more specialized goals, the sub-systems which had provided such distinct functions as vocational education and special education will broaden their conceptual base. The distinction of specialization and provincialism of separate sub-units will begin to disappear as vocational education must, of necessity, include conceptual skills and communication skills along with manipulative skills. Thus, the sub-systems begin to blend together to provide more complete educational services to the clientele of each sub-unit. Within some programs, this effort has already begun. It must be continued and expanded. Those vocational and technical programs which do not include such skills, either within the curricular content or in

conjunction with it, must begin to do so.

The public attitude about the value of education is the critical factor. The extent to which the educational system is able to help prepare individuals to lead productive and satisfying lives will determine future public attitudes.

SUMMARY

In the not so distant future, the American people will begin to question the now existing "specialization" found in the vocational, academic, and special education segments of our present school systems. This questioning can already be seen in recent legislation: P.L. 94-142 (academic special needs) and P.L. 94-482 (vocational special needs). From these laws it can be seen that special education is attempting to be a part of both academic and vocational education. It is now up to vocational education to try and bridge the gap between themselves and academic education. To survive, our educational system needs vocational, academic, and special education working together.

Vocational education must not be thought of as a separate entity within itself, but must view itself as a part of the total educational community. As a part of the total organization, vocational education should strive to work along side of, rather than separately, from other sub-units both within and outside of education. The perspectives of these units outside of vocational education, such as those conducting research, evaluation, and forecasting, can be very valuable to vocational decision-makers. With the knowledge of the past and present, and an insight into the future, vocational education will be able to accommodate to an image of vocational education for the future. There must be a willingness to

accept and implement implications for change where indicated. The tendency to protect territory must be lessened.

Given that vocational education is now adapting to the needs of the special needs student, the need for even greater adaptations can now be seen for the future. A tremendous potential exists for adult and continuing education in terms of the need for retraining. This population represents the post World War II baby boom and will ask vocational education to help them plan for life-long learning. To meet the needs of this vast population, vocational educators will have to be able to deal with more diversity than is presently required. New skills will have to be developed. A wider variety of program opportunities in the form of Individual Educational Plans (IEP) must be accommodated. Different instructional methodologies aimed at meeting both the needs of the employer and the individual must be designed. Vocational education must become concerned with the satisfaction and self-actualization of its individual students. It must be remembered though, that with the concept of life long learning, individuals will be entering and leaving the education system at many different levels. Vocational education will need to adapt to differing amounts of student expertise, experience, and knowledge. Ease of re-entry and exit must be paramount.

With this older population of the future comes the demand for a greater emphasis on service-oriented occupations. There is a need to expand emphasis in technical and human services occupations. An effective program will need to include emphasis in all of the following areas:

1. communication skills
2. human relations skills

3. conceptual skills for adaptability, and
4. indices pertaining to quality of life.

To whatever extent that past emphasis has included largely the acquisition of skills specific to job or technical performance, additional emphases will be needed. Vocational/technical programs will need to assess their own levels of emphasis in these areas to determine to what extent they include objectives which stress communication skills; to what extent they include objectives which enhance the individual's ability and/or readiness to interact with both peers and employers in a productive and successful way; to what extent they include cognitive understanding at a conceptual level which will allow the individual to transfer learning as the technology advances; and to what extent they take into account and build on the quality of life motivations of individuals. There are, no doubt, variations in the extent to which such aspects are currently incorporated within existing vocational/technical programs. Again, where such emphases exist, they must be reinforced and continued. Where they do not, they should be added.

By planning for the future, vocational education will be able to expand along side of, rather than separately from, the rest of education. A greater percentage of both the school-age and adult cohorts will enter and re-enter vocational education because of the totality of life long learning needs to be met.

DECLINING ENROLLMENT AND VOCATIONAL EDUCATION

Enrollment Patterns and Causes of Decline:

A service organization faced with a shrinking client population must be concerned. This factor, the decline in the number of school-age youngsters, represents the most potent factor for change in the existent educational organization than any other circumstance in its history.

The science of school management since the second world war has been the management of expansion. School planners have been asked to respond to an ever increasing demand for more facilities and more services. This circumstance is largely due to the "baby boom," which reached its zenith in 1957. Since that time, there has been a steady decline in the number of children born in this country. The peak K-12 enrollment occurred in 1971 with a total enrollment of 46.1 million. These children have now passed through their K-12 school years. In the past 19 years, the number of births in the U.S. has dropped 28%.

The future, however, is not all dark. The children of the 1950's are entering adulthood. If the peak child bearing age of women (20-29) is accepted as an indicator, there will be 48% more women in this age bracket in 1980 than in 1970. The Zero Population Growth family planning norm estimates 2.1 children per family, with a potential of 48% more families. This potential should cause a stabilization in the enrollment patterns during the next five to eight years. Some decline is still possible, however, due to the fact that the children-per-family figure

has dropped from 2.1 to 1.9. The U.S. Census Bureau Series II estimate of the average birth rate confirms the 2.1 per family figure. This is generally accepted as accurate. Given this index, a 19% increase in five to thirteen year old population will occur between 1980 and 2000. Secondary enrollments are expected to decline until 1990 followed by a 6% increase in the years between 1990 and 2000. Fishlow (Abramowitz, et al., 1978) believes that the Series II projection of the completed family size of 2.1 is likely because of the interaction between the economy and family size. It is becoming increasingly difficult to adequately support families with more than two children given current economic conditions and altered lifestyles. The minority population will increase from 12.9% to 14.8% by the year 2000.

While it is difficult to predict fertility rates and population, it is equally difficult to predict the future state of the economy. These two factors, however, are closely linked. Full employment, economic stability, and high levels of public confidence and optimism typically lead to increased birth rates. As discussed in Part II, current economic problems stem apparently, at least in part, from the sudden end of the era of cheap energy. It seems safe to say that, regardless of the political maneuvering in the areas of domestic or foreign policy, the economic situation does not auger well for expansion and growth of real income for the next several years. In addition, the large baby boom cohort, as it has moved through various age categories, has had a consistent and important impact at all stages. First stimulating the growth of the baby-goods industries and suburban housing markets, straining the capacities of the school systems, and creating a "youth culture" economy, this cohort is

now pressing the economy for entry level positions in the labor market. This competition for jobs will further exacerbate the lowered fertility rate problem. In addition to the demand for expansion of facilities and the need for more manpower to accomodate such growth, the public schools also faced expansion of the public's expectations relative to the functions of education. The current problem then, is to scale back the organization and its functions to keep pace with a scaled down client population, while at the same time maintaining public confidence and support. The decrease in enrollments has not been accompanied by a decrease in expectations. Yet declining enrollments often force program cuts, causing an "expectation lag." If the past record is any indication of the future, this same sluggish response can be expected when enrollments increase.

Pre-service post secondary institutions will face the decline in the 1980's as the population continues to decrease in the 18-25 age group. Some will be more affected than others. Those most able to survive will be those which are now well managed and whose administrators are willing and able to plan for flexibility in their programs. It is predicted that many small, private institutions will fail, and that numerous large institutions will face serious cut backs and reductions in service. In many areas this process has already begun. Post secondary institutions will experience a rapid, but short-lived growth in demand as the 1980's "echo" of the baby boom reaches college age around the year 2000.

As the decade of the 80's closes, the smaller age cohort will face an expanding entry job market which could cause them to seek greater domestic commitments. Such an occurrence could sharply increase the birth rate.

Predictions of overpopulation, starvation, famine, and world-wide disaster were based on simple linear projections of existing birth rates and fertility rates. Such projections assumed no radical changes in such factors as economic conditions, social norms and values, or other major social variables. Even into the 1960's, educators and demographers saw none of the indicators on the horizon that would cause them to alter their estimates. During this time when the growth psychology was reaching its apex, enrollment projections were highly optimistic and largely overestimated. There was a pervasive belief that continued growth was in the country's best interest and that "bigger was better." There was a blind faith that all problems could be solved by simply spending more money. Altered circumstances, however, have altered the prediction, at least within the U.S.

Although the Vietnam war brought a higher level of economic activity which is usually a precondition for increasing the birth rate, the uncertainty and instability of the time brought about a dramatic restructuring of mores. There were successful challenges to the accepted social norms and people began to adopt new values based on personal fulfillment. Family planning became more acceptable and more possible. Concern for the ecological impact of a growing population became apparent and accepted by many. The availability and acceptance of oral contraceptives made family planning much easier. More recently, the legalization of abortion as well as various forms of sterilization have furnished other methods of controlling the birth process.

In some areas, the decline in enrollments was retarded. There has been a large scale movement out of the central cities and into the

suburbs to rural areas. This movement has caused and is still causing population growth in some areas while others are experiencing rapid decline.

Thus, administrators and other educational decision-makers are being forced to learn to deal with the necessity for organizational reduction in a rational way. The critical factor in this process is the continued positive public image of the educational enterprise. Alarming, there are signs that that image is being tarnished. Public support through passage of school bond issues as well as operating tax levies has waned to a point where local residents have defeated such proposals even when the end result has been fiscal chaos and bankruptcy. Proposition 13 in California seemed to signal the opening shot of a tax payer revolution which threatened to destroy the entire local financial base of public schools. To their credit, voters appear to be awaiting a better assessment of the effects of such radical surgery before adopting the same procedure with budgets across the country. What must be remembered, however, is that by 1980, two out of every three taxpayers will be non-parents.

Without an increase in the overall birth rate, only a marginal impact may be realized on other fronts. One such area which has received considerable attention is the drop-out rate. There has been a modest, but steady increase in the drop-out rate. (For example, in Illinois; 70-71 = 5.8%, 71-72 = 6.0%, 72-73 = 6.2%, 73-74 = 6.6%.) This is a trend upon which vocational education could make a major impact. Other factors such as a decreasing mortality rate of children under five are also contributing to the changing enrollment picture, but it is clear that the days of continual and certain growth are gone.

Several concepts emerge from this scenerio as indicators of future

action for decision-makers. It is evident that managers will be confronted with, at best, a marginally stable client population and most probably a decreasing one. The management of decline will necessitate different strategies, skills, and commitments in the future. Marketing of educational services is becoming more and more important in order to enhance and protect a positive public image and thereby maintain public support. In the area of vocational education, it appears that in the short-term, a slight increase in the overall percentage of secondary level students will occur, but in the long run, all of the educational enterprise will need to increase and improve adult education and continuing education markets. It also seems evident that there will be a continued increase in state and federal involvement, gradually altering and redirecting the purposes of education to achieve wider social goals at the same time reducing the diversity and importance of more narrow local concerns. As the student clientele changes, so too must the educational programs. Given the emerging philosophical perspective which holds that education is a right of all citizens, such programs will, of necessity, need to be matched with student needs as well as state and national needs.

Effects of Declining Enrollment:

The management of decline relative to reduced pupil enrollments must be largely concerned with avoidance of qualitative reductions. Taken out of the context of a local community, many of the issues and decisions may be more readily rationalized. Educational administration, however, involves the management of irrationality. That is, hard decisions are not always possible from a strictly objective frame of reference. The public not only wants economy, it wants quality. The public not only wants

efficiency, it wants effectiveness.

A decline in the student population presents the potential for both positive and negative effects. During periods of rapid growth, there were often deleterious consequences associated with too many students. Half-day sessions, split class and double class sessions were sometimes necessary. These conditions are avoided when the number of students to be served becomes more manageable. At the same time, sufficient size is often required in order to maintain certain advantageous conditions. Declining enrollments will make it fiscally impossible to maintain low enrollment elective offerings.

A recent study by Dembowski, et al. (1979) gave empirical evidence showing that the number of elective courses offered is decreasing and that there is a difference between the number of elective courses offered in school districts with increasing versus decreasing enrollments. In fact, that study demonstrated that the behavior of schools with increasing versus decreasing enrollments varied considerably with regard to instructional policy issues. For example, the following differences were found:

1. Decreasing enrollment districts offered slightly fewer elective courses in vocational education than did increasing enrollment school districts, although both types of districts increased slightly the number of elective courses in vocational education in the period from 1970 to 1977.
2. The student enrollments in vocational education and related courses in general (including Industrial Arts, Commercial Education, Distributive Education, Home Economics Education, and Agricultural Education) in the period from 1970 to 1977 increased substantially for districts with increasing enrollments and only slightly for decreasing enrollments. The difference between the two groups of districts is statistically significant.
3. The number of staff teaching vocational education courses

also increased for both types of school districts having slightly more staff increases.

4. The courses actually taught in vocational education also increased slightly, but there was little difference between the increasing and decreasing enrollment districts.
5. The facility space allocated to vocational courses increased for types of districts, with the increasing enrollment districts making significant increases in their facility space allocations to vocational education.
6. The student enrollments in the academic core subjects in the period from 1970 to 1977 increased substantially for school districts with increasing enrollments but decreased slightly for school districts with decreasing enrollments.

On the basis of these findings, it may be concluded that declining enrollments have a marked effect on the curricular offerings of school districts, and that as a curricular core of course offerings, the vocational courses are faring somewhat better than the academic courses in the face of declining enrollments.

School district consolidation and reorganization will be required in response to altered patterns of enrollment and in order to accomodate specific areas of pupil loss. Such consolidation and reorganization efforts are never easily accomplished. Schools are community centers. If they are to be closed, then provision must be made for the incorporation of children involved in after-school and summer recreation programs. Often, the school represents the neighborhood or community identity. Not infrequently, bitter emotional struggles accompany any attempts to eliminate such centers.

Educational organizations, once able to accomodate the demands of most contending groups must now face overt problems which were heretofore internal. Unlimited resources are no longer available to serve as the buffer between such forces. Difficult choices must now be made. Educators can no longer buy their way out of the decision-making process.

An obvious example of the difficulty of the choices which must be confronted occurs in the area of staffing. As the number of pupils decrease, the pupil to teacher ratio will show a corresponding decrease. Maintenance of lower pupil/teacher ratios is considered by many to be a desirable educational circumstance which will enhance the quality of instruction. Given this logic, decreased enrollments may be viewed as having the beneficial effect of increasing the quality of instruction. (Note: There is no research evidence to support this contention unless class sizes fall below 15 pupils per teacher. The concept is, nevertheless, endorsed by teacher's associations and is widely held popular belief.) School managers might, thus, seek to maintain their current levels of staffing rather than reducing professional staff in proposition to reduced student enrollments.

The alternative choice would be to maintain the current pupil/teacher ratio by cutting staff. Such an alternative, when selected, typically rejects the "class size equals quality" argument and proceeds on more openly economic grounds. That is, the argument used is that quality of instruction is not related to pupil/teacher ratio, and an equally good educational program can be provided for fewer dollars by eliminating teaching positions. In better economic times, educators were able to successfully avoid this argument since they were assured of enough money to operate schools with a pupil/teacher ratio which employed a significant percentage of the teacher population. The problem is further confounded for decision-makers in that smaller enrollments bring problems of underutilization of facilities. This condition is typically viewed as an inefficiency.

As the population of clients served by one educational sub-unit decreases, there will be increased competition for clients which have traditionally been served by other sub-units. That competition will most likely occur among schools serving the same populations: high schools, adult schools, vocational schools, community colleges. Decreasing enrollments are pressuring colleges and universities to expand adult programs in order to avoid staff cuts. Because adult continuing education classes are often taught by lower paid part-time staff, these excess funds are being used to support the regular programs. A current estimate predicts that 80 million adults in the U.S. would like to undertake further learning. The "baby boom" children are entering adult years and will swell this potential greatly. Clearly, now is the time for expansion of adult education services. There is great competition between educational agencies for the adult market. Consequently, there is much overlap between course offerings of the different institutions. The overall result of such duplication is inefficiency and a waste of taxpayer dollars. Such inefficiency, when recognized, will lead to an overall cut back in available funds.

The most salient issue associated with declining enrollment appears to be that one which is connected to the quantity versus quality dichotomy. Does the necessity to reduce the quantity of educational service mandate similar reductions in quality? The State Planning Agency for the State of Minnesota, in a report on Managing School Districts with Declining Enrollments, says "no." This 1976 case study of districts with enrollment declines showed that while there were staff cut backs, program cut backs did not necessarily result. Many districts adjusted by offering courses

for a half year or a semester in order to fill losses. A similar report of Nebraska school adaptations showed that the greater the drop in enrollments, the lower the drop-out rate and the higher the achievement scores. One explanation of these phenomena is that there was lower economic activity in that area and therefore, less incentive to drop out. Also, schools try harder to hold on to students, thereby avoiding losses of state aid. In addition, there were fewer expulsions and suspensions as well as an increase in alternative programs. It was hypothesized that increased individualized attention and more competitiveness resulted from small student bodies and thereby resulted in higher achievement scores.

In interviews conducted by researchers of the Legislators' Education Action Project in July of 1976, administrators and other education experts from five states, (Illinois, Iowa, Kansas, Michigan, and Minnesota) were asked about the effects of declining enrollments. They were highly consistent in enumerating three major effects:

1. Lower pupil/teacher ratios
2. More available facilities and space for programs
3. Increased quality of instructional staff due to greater selection potential.

Enrollment changes will have an effect on the educational organization. Any major effect will impact all aspects of the organization, including the vocational sub-system. Although the total vocational enrollment still appears to be increasing. This is largely due to an educational market opting for vocational education programs. From 1972 to 1973, total vocational enrollment increased by 4.1% even though the total general enrollment decreased. That is, secondary vocational education enrollment is increasing as compared to total secondary enrollment. The ratio

of secondary vocational education enrollment to total secondary enrollment has gone from 39.4% in 1972 to 47.2% in 1974 and is expected to reach 69.4% in 1979. In Indiana, the vocational education percentage has increased every year since 1968, but the rate of that percentage increase has slowed in recent years. Some studies have shown that the rate of funding of vocational programs has exceeded the percentage of growth in relation to other non-vocational adult related programs.

These same studies tend to show that the more funding such programs receive, the more their enrollments increase. This would seem to suggest that greater competition for students could lead to greater competition for funds as well.

Of increasing importance to vocational educators engaged in such competition for funds will be the somewhat second class image with which this sub-unit has had to contend. That is, vocational education would appear to be an "inferior good" in the service market, where occupations in an area require vocational skills, there is a high rate of vocational enrollment. But enrollment in vocational education is negatively related to per capita incomes in the state. Thus, as per capita income increases, vocational enrollments decrease. Improved communication and increased attention to the public image of the vocational sub-unit will be required to maintain the gains which have been made.

The study by Dembowski et al. (1979) shows that within the subject areas in vocational education, there are differences in enrollments, staffing, courses offered and taught, and facility space allocated between districts with varying degrees of declining enrollments. This study asked school superintendents to respond to a number of questions pertaining to the extent of change in five vocational subject areas in the period from

1970 to 1977, as well as changes in ten other curricular areas. A summary of the results of the analysis of this data may be found in Demowski et al. (1979).

Their findings substantiate the conjectures of many practitioners in vocational education that vocational education is increasing in both enrollments and courses taught despite the effects of declining student populations. When the enrollments between the vocational courses and the academic courses are compared, it appears that vocational education courses, preferred by the students in the school districts faced by declining enrollments, are felt to be closely tied to the changes in the economy. It has already been noted that a tight economy has the effect of lowering the birth rate because young families cannot afford to raise children comfortably. At the same time, in a tight economy, jobs are scarce. Many people believe that when faced with these economic conditions, it is better to train the high school students in a vocational area which will aid that student in finding gainful employment when he/she graduates from school. Thus, a rather tenuous link can be made between declining enrollments, the economy, and vocational education. It may be supposed that in an area which is experiencing declining enrollments, the economy is slowing down. This is causing many students to prefer the safety of obtaining a job in a vocational area rather than taking the academic subjects and hoping a suitable job will be found later.

VII CONCLUSIONS AND RECOMMENDATIONS

A review of the literature relative to declining enrollment, most of which occurs between 1977 and 1979, reveals several recurrent themes. These themes are consolidated into a series of statements which follow:

1. The causes and consequences of declining enrollment are numerous, complex, and interrelated. There are political, economic, demographic, organizational, and educational components which need to be considered in order to obtain a comprehensive understanding of its origin, nature, and implications.
2. Declining enrollment affects all levels of education--federal, state, county, school district, local school--however, the aspects of declining enrollment vary across the levels and even within the levels.
3. The impact of declining enrollment has been increasing during the latter part of the 70's. Eighty percent (80%) of the literature on declining enrollment appeared in the last two years: 1977 and 1978.
4. The main--but not the sole--cause of declining enrollment is the reduction in the fertility rate from its peak of 3.8 children per woman in 1957 to the record low of 1.8 children per woman in 1977.
5. The percentage of national decline in school enrollment that is expected between 1972 to 1982 varies from report to report. The range of projections of the percent of national school enrollment decline is from 10% to 18%, depending upon the exact migration, population characteristics, local economy, housing development, etc.
6. This pervasive experience of declining enrollment may produce a reverse type of mind set to that which was characteristic of the sixties which was one of expansion.
7. There are some who predict another period of growth but not quite as spectacular as the one of the sixties. Elementary enrollment will decline until 1982 at which time it will begin to slowly rise. Secondary enrollment will decline until 1990.
8. There will be a decline in the relative number of youth and an increase in the relative number of 25+ years age group. This will have numerous effects upon our society, politics, economy, and educational system.
9. The ethnic structure of the population is not expected to change much over the 1974 to 1990 period. However, their geographic location and distribution will be of greater significance than a change in number.
10. On a national scale, one sub-group of the school enrollment population is expected to increase over the 1977 to 1982 period: the sub-group receiving special education services. A national projection is that 11% of the student population will require these services.

11. Declining enrollment is occurring at a time when education's public image is poor and education is low on the ladder of public priorities. This further complicates the efforts taken to meet the challenge of declining enrollment.
12. By 1980, two out of every three taxpayers may be non-parents. This may have serious implications for the funding of education.
13. There is a general agreement about the need for an intensive public relations campaign to improve the image of education.
14. School closings and staff reductions may produce litigation and lower morale.
15. The competition for the adult education age bracket will become increasingly fierce and result, most likely, in the changing of admission standards, recruitment programs, and curricular programs among post secondary institutions.
16. "The costs of operating a school system are rising, while the revenues--especially in those experiencing severe enrollment declines--are decreasing." (National School Public Relations Association, 1977).
17. State funding policies towards schools that make allocations based upon enrollment will need to be changed in an era of declining enrollment.
18. Declining enrollment will mean less hiring of new teachers and staff reductions. Less promotion and mobility in education's employment hierarchy are other probable outcomes. The average age of the teaching staff will increase and the staff is likely to become more stable. Salaries may be reduced (as in California) or salary increments will be smaller and less frequent. Teachers' workloads may increase to make-up for the dismissed teachers. All of these factors will probably lower teachers' job satisfaction and cause a decrease in morale among them.
19. There is optimism in the area dealing with the impact of declining enrollment on classroom learning and instruction. This will not necessarily result in a reduction of quality. With appropriate foresight, planning, and management, the quality of education can be maintained and possibly improved while holding costs stable.
20. The impact of declining enrollment calls for a new style and form of educational administration. It has been labeled as "management of decline" or "decremental planning". But the main theme seems to be a greater need for educational leadership which goes beyond mere educational management. The

problems that derive from declining enrollment in conjunction with the current economic, racial, and political measures impacting on education at a time when its public image is at its lowest presents one of the greatest challenges an educational administrator can ever expect to face.

The key task for such leadership will be to provide flexibility to an organization which has been slow to react to its environment and which has traditionally shown itself to be inflexible. More than anything else, the management of decline will mean the need to assess and reassess organizational priorities from the perspective of market analysis.

The future of vocational/technical education, then would seem to be more directly linked to economic and socio-cultural influences than to fluxuations in enrollment patterns. As other elements in the educational structure are affected, however, they may shift their emphases to compete with vocational education for a share of the dwindling pre-service student population as well as a share of the burgeoning adult continuing education market. The projected population growth of the early 1980's may, perhaps, retard or interrupt the impact of such sub-system competition, but the trend is now and will continue to be systemic merger; increased generalization and less unit specialization. Will general education become vocational education or special education? No. Will vocational education become general education or special education? No. But clearly, each will take on characteristics of the other and move closer to the sacred educational concept espoused by all--the individualized education of the whole child.

Recommendations:

Throughout this report there are discussions of social conditions which are considered to have a potential impact on vocational education. Where these discussions occur, there are recommendations and implications included. What follows is a listing and summary of those recommendations

extracted from the context of the discussion found in the section on findings, pp. 9-41.

Vocational/Technical Educators should:

1. Understand and be ready to deal with a reductionist rather than expansionist psychology regarding education in general.
2. Understand the inter-relationships of the structural components of the whole educational enterprise, to better cope with the movement toward generalization of services.
3. Take note of and begin to plan for the need to serve a rapidly growing adult population with retraining vocational needs.
4. Examine the perspectives used and value structures inherent in decisions made about the future direction for vocational education in Indiana.
5. Continue to develop facility to influence and deal with governmental involvement since this involvement will only increase. The political-socialization of the educator may be his only future route to influence the decision-making process.
6. Be aware of, even ahead of, changing social conditions and values which impact vocational education. The trend to use educational programs to achieve multiple social purposes is a concomitant of governmental involvement and finance. It will continue as new social issues become paramount.
7. Plan for change and develop organizational mechanisms and strategies to accomodate change. Similarly, develop training programs which will turn out students equipped to live in and adjust to a rapidly changing society.
8. Continue and expand curricular emphasis on such elements as: communication skills, personal-social skills, cognitive/conceptual understandings, and quality of life aspects of vocations. Examine the extent to which vocational programs currently address such curricular objectives.
9. Understand and prepare to deal with inter-organizational (sub-system) competition for student populations and sources of revenue.
10. Employ markey analysis techniques to continue to assess the needs of consumers--both those who receive vocational training and those who employ those students. Increasingly,

public relations and marketing techniques will be needed to enhance the image of vocational education as a way of competing for a limited pre-service student population.

11. Continue to look to and plan for the future through ongoing research and development efforts.

FINAL REPORT ABSTRACT

- A. The PROCESS/PRODUCT(S) to be adopted/adapted and delivered by this project are:

a final report: THE PROJECTED EFFECTS OF POPULATION CHANGE ON VOCATIONAL/TECHNICAL EDUCATION

- B. The specific OBJECTIVES of the proposal are to:
(Number each objective.)

1. Survey literature related to "futures" in education and vocational education
2. Survey literature related to declining enrollment
3. Relate declining enrollment and "future" projections to vocational/technical education

- C. The PROCEDURES for achieving these objectives are:
(Number each procedure to correspond with its related objective or reference by number)

1. and 2. A study team of faculty and graduate students conducted a literature search in two areas:
 - a. educational futures
 - b. declining enrollment
3. Weekly study team meetings were held to present and discuss findings, problems and directions.
4. Final summaries and reports were coordinated and written by faculty.
5. Project director edited and finalized the report.

NOTE: the procedures should

- tell HOW the objectives were accomplished
- outline methods, subjects, controls, and variables
- summarize analysis of results

- D. The expected OUTCOMES for or potential IMPACTS on vocational education are:
(Number each outcome to correspond with its related objective and procedure or reference by number.)

1. To provide a compilation and analysis of current thinking from the literature on educational futures and vocational education as it relates to the potential effects of declining enrollment.
2. To describe such effects in terms of impact expected.
3. To produce a report for use by decision-makers as background and one input to the process of policy making and goal setting in vocational education.

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